

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P333788

Luminaire Tested: **S122DS-S865D840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333788  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DS-S865D840-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 865 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3390.6 lumens  
Efficiency: N/A  
Efficacy: 97.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

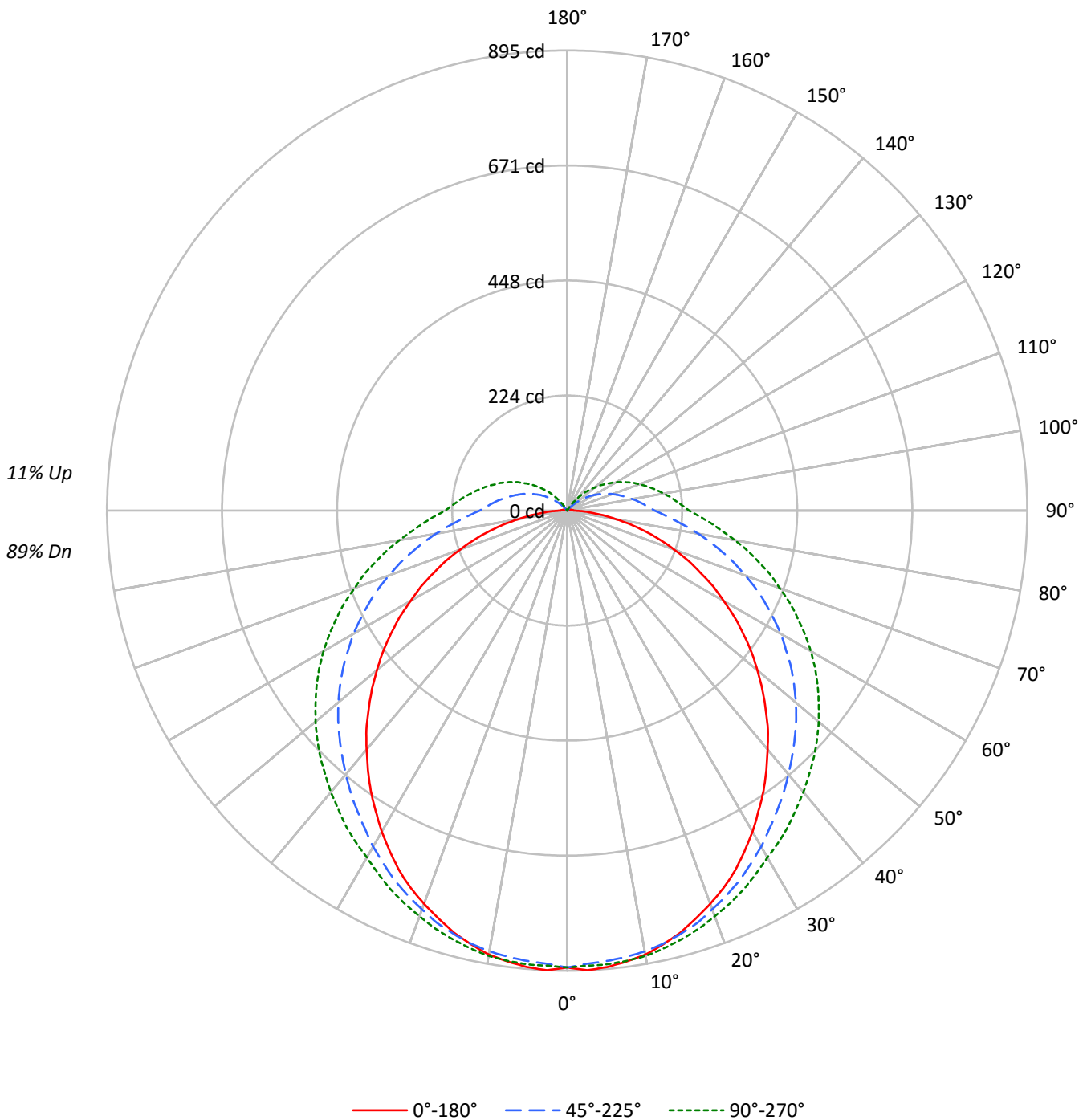
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89				
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72	69				
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56				
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46				
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42	39				
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36	33				
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31	29				
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25				
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23				
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22	20				
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14347	14347	14347
5°	14444	14256	14360
10°	14378	14273	14421
15°	14208	14250	14422
20°	13984	14184	14428
25°	13766	14133	14476
30°	13446	14070	14525
35°	13123	14038	14773
40°	12785	14115	15064
45°	12467	14292	15497
50°	12130	14589	16046
55°	11781	14973	16749
60°	11354	15513	17673
65°	10923	16237	18892
70°	10456	17386	20729
75°	9881	19520	24024
80°	8982	24073	30776
85°	8596	38644	52000



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.2	2.5
10°-20°	241.6	7.1
20°-30°	366.1	10.8
30°-40°	445.8	13.1
40°-50°	479.6	14.1
50°-60°	465.8	13.7
60°-70°	406.8	12.0
70°-80°	313.1	9.2
80°-90°	209.7	6.2
90°-100°	144.7	4.3
100°-110°	105.6	3.1
110°-120°	69.8	2.1
120°-130°	38.9	1.1
130°-140°	16.3	0.5
140°-150°	2.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	691.9	20.4
0°-40°	1137.7	33.6
0°-60°	2083.1	61.4
0°-90°	3012.6	88.9
90°-120°	320.1	9.4
90°-150°	378.0	11.1
90°-180°	378.0	11.1
0°-180°	3390.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	889	889	889	889	889	
5°	891	887	880	887	886	85
15°	850	852	852	864	863	239
25°	773	782	793	809	813	355
35°	666	688	712	740	750	416
45°	546	581	626	666	679	422
55°	418	465	532	578	595	374
65°	286	349	425	478	494	284
75°	158	230	313	368	385	168
85°	46	126	209	263	281	49
90°	13	88	170	222	237	9
95°	10	71	148	197	212	8
105°	6	44	111	156	170	7
115°	5	19	77	116	130	5
125°	3	3	44	79	90	3
135°	1	1	14	41	52	1
145°	0	0	0	8	14	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P333788

CATALOG NUMBER: S122DS-S865D840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	888.6	888.6	888.6	888.6	888.6
2.5°	895.0	891.2	882.2	888.6	886.0
5°	891.2	887.3	879.6	887.3	886.0
7.5°	884.7	882.2	875.7	884.7	883.4
10°	877.0	874.4	870.6	880.9	879.6
12.5°	864.1	865.4	862.8	873.1	871.9
15°	850.0	852.5	852.5	864.1	862.8
17.5°	831.9	837.1	841.0	852.5	852.5
20°	813.9	820.3	825.5	839.7	839.7
22.5°	794.6	802.3	810.0	824.2	826.8
25°	772.7	781.7	793.3	808.8	812.6
27.5°	746.9	761.1	774.0	793.3	795.9
30°	721.2	737.9	754.7	775.3	779.1
32.5°	692.9	712.2	732.8	757.2	765.0
35°	665.8	687.7	712.2	740.5	749.5
37.5°	636.2	660.7	691.6	722.5	731.5
40°	606.6	634.9	669.7	703.2	714.7
42.5°	578.2	606.6	647.8	685.1	696.7
45°	546.0	580.8	625.9	665.8	678.7
47.5°	515.1	552.5	604.0	645.2	659.4
50°	482.9	522.9	580.8	624.6	638.8
52.5°	452.0	494.5	556.3	601.4	616.9
55°	418.5	464.9	531.9	578.2	595.0
57.5°	386.3	437.9	504.8	555.1	571.8
60°	351.6	407.0	480.4	529.3	547.3
62.5°	320.7	378.6	452.0	504.8	521.6
65°	285.9	349.0	425.0	477.8	494.5
67.5°	255.0	320.7	397.9	450.7	468.8
70°	221.5	288.5	368.3	423.7	439.1
72.5°	190.6	260.1	341.3	395.4	414.7
75°	158.4	230.5	312.9	368.3	385.1
77.5°	127.5	202.2	285.9	341.3	359.3
80°	96.6	175.1	258.9	312.9	331.0
82.5°	70.8	148.1	233.1	287.2	303.9
85°	46.4	126.2	208.6	262.7	280.7
87.5°	28.3	105.6	188.0	240.8	257.6
90°	12.9	87.6	170.0	221.5	237.0
92.5°	11.6	79.8	158.4	208.6	224.1
95°	10.3	70.8	148.1	197.0	212.5
97.5°	9.0	64.4	139.1	186.7	202.2
100°	9.0	56.7	128.8	176.4	190.6
102.5°	7.7	50.2	119.8	166.1	180.3
105°	6.4	43.8	110.8	155.8	170.0
107.5°	6.4	37.3	101.7	145.5	159.7
110°	5.2	30.9	94.0	135.2	149.4



TEST NUMBER: P333788

CATALOG NUMBER: S122DS-S865D840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	25.8	85.0	126.2	140.4
115°	5.2	19.3	77.3	115.9	130.1
117.5°	3.9	14.2	68.3	106.9	119.8
120°	3.9	9.0	60.5	96.6	110.8
122.5°	3.9	5.2	52.8	87.6	99.2
125°	2.6	2.6	43.8	78.6	90.1
127.5°	2.6	1.3	36.1	68.3	79.8
130°	2.6	1.3	28.3	59.2	69.5
132.5°	2.6	1.3	20.6	50.2	60.5
135°	1.3	1.3	14.2	41.2	51.5
137.5°	1.3	1.3	7.7	32.2	41.2
140°	1.3	0.0	2.6	23.2	30.9
142.5°	1.3	0.0	0.0	15.5	21.9
145°	0.0	0.0	0.0	7.7	14.2
147.5°	0.0	0.0	0.0	1.3	5.2
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)